

Appl. No. 09/394,918
Amendment dated: June 20, 2006
Reply to OA of: March 20, 2006

REMARKS

This is in response to the Official Action of March 20, 2006, in connection with the above-identified application. Applicants have amended the claims of the instant application in order to more precisely define the scope of the present invention, taking into consideration the outstanding Official Action.

Specifically, Applicants have amended claims 7 and 14 to recite that the saw machine is repositioned with respect to an adjacent substrate areas after the substrate strip undergoes shrinkage. These amendments are clearly supported by the originally filed specification, including, e.g., page 4, lines 21-29. This portion of the specification explains that the substrate strip will undergo shrinkage over time due to the change in temperature from the packaging step occurring before the substrate strip is singulated to the sawing step, and therefore the substrate may shrink between the time the sawing process begins and finishes. Accordingly, the claims of the present invention now recite that after the first substrate area is sawed, the substrate strip undergoes shrinkage, and the sawing machine is repositioned with respect to an adjacent substrate area, thereby taking into account any shrinkage of the substrate and corresponding movement of the alignment and cutting marks.

Applicants have also added new claims 15 and 16, which recite that the alignment marks are formed at the corners of each substrate area on the substrate strip. These new claims are clearly supported by the specification as originally filed, including, e.g., Figures 2 and 3.

In light of the amendments to the claims, Applicants respectfully submit that all claims now pending in the instant application are in full compliance with the requirements of 35 U.S.C. §112 and are clearly patentable over the references of record.

The rejection of claims 7, 9-11 and 14 under 35 U.S.C. §102(e) as being anticipated by Roberts (US Pat. No. 6,321,739) has been carefully considered but is most respectfully traversed in light of the amendments to the claims and the following comments.

Appl. No. 09/394,918
Amendment dated: June 20, 2006
Reply to OA of: March 20, 2006

Applicants wish to direct the Examiner's attention to MPEP § 2131 which states that to anticipate a claim, the reference must teach every element of the claim.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

The Official Action urges that Roberts discloses a strip 20/40 having a plurality of substrate areas, providing a plurality of alignment marks 36/46/48, and providing a plurality of cutting marks 36/46/48. However, Applicants respectfully traverse this statement and further respectfully submit that the Official Action has not addressed every element recited in the claims.

Firstly, Applicants note that the invention disclosed in Roberts does not disclose two substrate strips as urged in the Official Action, but rather discloses a substrate strip 20 and a plate 40 that the substrate strip is placed into prior to sawing the substrate strip. Therefore, it also follows that grooves 46 and 48 in plate 40 cannot be reasonably interpreted as alignment marks or cutting marks formed on the substrate strip. Rather, the grooves 46 and 48 are clearly described in the specification of Roberts as grooves in the plate 40 for receiving the blade of a cutting saw (see, e.g., col. 2, lines 65-66).

This disclosure is contrary to what is claimed in the instant application. Claim 7, for example, clearly recites that a plurality of alignment marks and cutting marks are formed around the individual substrate areas on the substrate strip. Thus, it is evident from the claims that the alignment marks and cutting marks of the instant invention are formed on the substrate strip, and not on a separate plate for receiving the substrate strip as disclosed in Roberts. Therefore, as a preliminary matter, Applicants respectfully

urge that elements 40, 46 and 48 do not disclose a substrate or alignment/cutting marks formed on a substrate.

Accordingly, the portion of Roberts relevant to the instant invention is limited to the substrate 20 and the cutting saw alignment marks 36. With respect to the so-called cutting saw alignment marks 36, Applicants respectfully submit that, after a careful reading of Roberts, it is evident that these marks serve no alignment function whatsoever and therefore cannot be reasonably interpreted as alignment marks or cutting marks as claimed in the instant application.

Roberts discloses a substrate strip that is placed into a plate 40 containing grooves 46 and 48. The substrate strip is aligned within the plate by the manner in which the corners of the substrate strip align with the recessed area 44. That is to say, the substrate strip has three square corners 21a and one beveled corner 21b. These corners of the substrate correspond to the three circular corners 68 and the one rounded corner 70 of the recessed area 44 of the plate 40. As stated in the specification of Roberts, "[t]he fourth corner 70 is rounded for receiving a shaped corner 21b on the substrate 20." (see col. 3, lines 2-25). The specification continues that the corners 68 and 70 cooperate to ensure that the substrate 20 is properly oriented in the fixture 40.

Further, the specification of Roberts discloses that grooves 46 and 48 in the plate 40 are for receiving the cutting blade. As the cutting blade may only extend through the substrate strip at the lines where the grooves are, it becomes abundantly clear that all alignment in the invention disclosed in Roberts is due to the orientation of the substrate strip in the plate and where the grooves are located in the plate. That is to say, despite labeling the substrate strip with so-called cutting saw alignment marks 36, Roberts in no way uses the cutting saw alignment marks as alignment marks or cutting marks. The alignment where the cutting saw cuts is due to the orientation of the substrate strip in the plate and the location of the grooves, and the lines cut by the cutting machine are due to the grooves below the substrate that receive the saw. Accordingly, in light of a full understanding of the invention disclosed in Roberts, Applicants respectfully submit

Appl. No. 09/394,918
Amendment dated: June 20, 2006
Reply to OA of: March 20, 2006

that no marks on the substrate strip may be reasonably interpreted as alignment marks or cutting marks. Applicants therefore respectfully submit that Roberts fails to disclose each and every element of the claimed invention and is therefore incapable of properly supporting a §102(e) rejection according to the guidelines set forth in MPEP §2131. It is therefore respectfully requested that this rejection be withdrawn.

Further, Applicants respectfully submit that the Roberts reference fails to disclose the claim feature of repositioning the saw machine with respect to an adjacent substrate area. The present invention is designed to move and re-align the saw machine with respect to the next substrate area after the preceding substrate area has been cut. That is to say, after cutting a first substrate area, the saw machine re-positions itself with respect to the alignment marks and cutting marks corresponding to an adjacent substrate area.

This is contrary to what is disclosed in Roberts. The substrate strip disclosed in Roberts is placed into the recess of a plate, thus fixing its position. Grooves formed in the plate dictate where the cutting machine cuts lines in the substrate strip. The cutting machine works from one end of the substrate strip to the other, and cuts made in the substrate are controlled solely by how the substrate is oriented within the plate and where the grooves in the plate below the substrate strip will allow the cutting machine to cut. There is no step in Roberts where, after the cutting machine finishes a first substrate area, the cutting machine realigns itself with respect to alignment marks formed on the substrate strip that set where the next substrate area is. The invention disclosed in Roberts is restricted to merely cutting where the grooves are located and depends on the substrate strip being properly aligned in the plate, not on any alignment marks made on the substrate strip to denote a substrate area.

Accordingly, Applicants respectfully submit that Roberts fails to disclose a step of repositioning the saw machine with respect to an adjacent substrate area as claimed in the instant application. Because Roberts does not teach every element of the claimed invention, the reference is incapable of properly supporting a §102(e) rejection according to the guidelines set forth in MPEP §2131 and should therefore be withdrawn.

Appl. No. 09/394,918
Amendment dated: June 20, 2006
Reply to OA of: March 20, 2006

Finally, with respect to the amendments to claims 7 and 14, Applicants note that Roberts clearly fails to disclose repositioning the cutting machine with respect to an adjacent substrate area after the substrate has undergone shrinkage. There is absolutely no mention in Roberts that the substrate undergoes shrinkage or that the cutting saw makes any sort of compensation for such shrinkage between cutting individual substrate areas. Rather, the invention disclosed in Roberts cuts the substrate only where the grooves in the plate allow it to cut and makes no adjustment to where the cuts are made based on any shrinkage that may occur during the sawing process. Clearly the invention disclosed in Roberts is incapable of making any such accommodation as the spacing of the grooves in the plate are predetermined and their location cannot be adjusted in the middle of the sawing process. Accordingly, since Roberts clearly fails to disclose every element of the claimed invention, the reference is incapable of properly supporting a §102(e) rejection. Applicants therefore respectfully request that this rejection be withdrawn.

The rejection of claim 12 under 35 U.S.C. §103(a) as being unpatentable over Roberts as applied to claim 7 in view of Drussel et al. (US Pat. No. 6,047,470) has been carefully considered but is most respectfully traversed in light of the amendments to the claims and the following comments.

Applicants wish to direct the Examiner's attention to the basic requirements of a prima facie case of obviousness as set forth in the MPEP § 2143. This section states that to establish a prima facie case of obviousness, three basic criteria first must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Appl. No. 09/394,918
Amendment dated: June 20, 2006
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Section 2143.03 states that all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Applicants also note MPEP §2143.01, which states in part that, if a proposed modification would render the prior art invention unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Applicants also most respectfully direct the Examiner's attention to MPEP § 2144.08 (page 2100-114) wherein it is stated that Office personnel should consider all rebuttal argument and evidence presented by applicant and the citation of In re Soni for error in not considering evidence presented in the specification.


The §103(a) rejection of claim 12 depends on the rejection of claim 7 as being anticipated by Roberts. However, as discussed above, the Roberts reference fails to disclose several features of the claimed invention. Furthermore, the Drussel reference fails to remedy any of the identified deficiencies of Roberts. Therefore, as neither Roberts nor Drussel, either standing alone or taken in combination, disclose or suggest every element of the claimed invention, Applicants respectfully submit that the references cannot properly support a §103(a) rejection according to the guidelines set forth in MPEP §2143. It is therefore respectfully requested that this rejection be withdrawn.

Finally, Applicants note new claims 15 and 16, which recite that the alignment marks are formed at the corners of the substrate areas. Neither the Roberts nor the Drussel reference disclose this feature of the claims, and therefore Applicants respectfully submit that claims 15 and 16 are clearly patentable over the references of record.

Appl. No. 09/394,918
Amendment dated: June 20, 2006
Reply to OA of: March 20, 2006

In view of the above comments and further amendments to the claims, favorable reconsideration and allowance of all of the claims now present in the application are most respectfully requested.

Respectfully submitted,
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